ENVIRONMENTAL CHEMISTS

Date of Report: July 10, 1997 Date Received: July 3, 1997

Project: Metro Self Monitor, PO #M74695 Date Samples Extracted: July 7, 1997 Date Extracts Analyzed: July 8, 1997

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, ZINC USING METHOD 6010

Samples Processed Using Method 3005A Results Reported as mg/L (ppm)

Sample ID		Chromium	Copper	<u>Nicke</u>	l <u>Zinc</u>
M74695		0.34	0.35	0.33	0.07
Method Blan	k	<0.05	<0.05	<0.05	<0.05

ENVIRONMENTAL CHEMISTS

Date of Report: July 10, 1997 Date Received: July 3, 1997

Project: Metro Self Monitor, PO #M74695

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 79361 (Duplicate)

Analyte:	Reporting Units	Sample Result	The second secon	olicate esult	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.34		0.32	6	0-20
Copper	mg/L (ppm)	0.35		0.29	19	0-20
Nickel	mg/L (ppm)	0.33		0.32	3	0-20
Zinc	mg/L (ppm)	0.07		0.12	53a	0-20

Laboratory Code: 79361 (Matrix Spike)

	Reporting	Spike	Sample	% Rec	covery	Acceptance	Relative Percent
Analyte:	Units	Level	Result	MS	MSD	Criteria	Difference
Chromium	mg/L (ppm)	5	0.34	98	94	80-120	4
Copper	mg/L (ppm)	5	0.35	95	88	80-120	8
Nickel	mg/L (ppm)	10	0.33	94	94	80-120	0
Zinc	mg/L (ppm)	5	0.07	97	96	80-120	1 - 1

Laboratory Code: Spike Blank

	Reporting Spike		% F	Recovery	Acceptance	Relative Percent	
Analyte:	<u> Units</u>	Level	MS	MSD	Criteria	Difference	
Chromium	mg/L (ppm)	5	99	100	80-120	1	
Copper	mg/L (ppm)	5	97	99	80-120	2	
Nickel	mg/L (ppm)	10	100	100	80-120	0	
Zinc	mg/L (ppm)	5	101	101	80-120	0	

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282

KJ 7/3/97

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SAMPLE CHAIN OF CUSTODY

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06/09/97

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Beth Albertson, M.S. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. Melanie Kirol, B.S. July 10, 1997 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

INVOICE # 97ACU0710-1 DUPLICATE COPY

Accounts Payable Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

RE: Project Metro Self Monitor, PO #M74695: Results of testing requested by Gerald Thompson, Project Manager for material submitted on July 3, 1997.

FEDERAL TAX ID #(b) (6)

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

July 10, 1997

Gerald Thompson, Project Manager Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on July 3, 1997 from your Metro Self Monitor, PO #M74695 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Kurt Johnson

Chemist

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